CEVE 570 Foundationss

Spring 2018

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Lecture day/time: Monday and Friday 4:05 – 5:20 pm

Office Hours: Before and after lectures and by appointment

Textbook: *Geotechnical Engineering – Unsaturated and Saturated Soils* by Jean-Louis Briaud
Wiley ISBN# 978-0-4-470-94856-9

Prerequisite: CEVE 470 or consent of Instructor

Synopsis of Course: This course is intended to be the second of a two-course sequence in geotechnical engineering. It applies the knowledge of soil concepts and properties gained in the Soil Mechanics course, to selecting and analyzing appropriate foundation systems to retain and/or transfer load to or from the earth. The course is intended to benefit senior undergraduate or graduate students with a focus on geotechnics and/or structures.

Course Topics:

1) Introduction to Geotechnical Engineering Practice
2) Retaining Walls & Lateral Pressures
3) Types of Foundations
4) Shallow Foundations
    a. Bearing Capacity
    b. Settlement
        i. Tolerable Limits
        ii. Immediate
        iii. Sand
        iv. Clay

5) Deep Foundations
    a. Pile Types
    b. Axial Capacity
    c. Settlement
    d. Lateral Capacity
    e. Pile Groups
6) Ground Modification Techniques
7) Methods of Subsurface Exploration

Grading:

Class Participation	5%
Homework	15%
Mid Term	40%
Final	40%

Absence Policy: There is no formal absence policy. Nevertheless, attendance during the lectures is strongly encouraged and figures partially into the 5% Class Participation score.

Disability Support Services: If you have a documented disability or other condition that may affect academic performance you should: 1) make sure this documentation is on file with Disability Support Services (Allen Center, Room 111 / adarice@rice.edu / x5841) to determine the accommodations you need; and 2) talk with me to discuss your accommodation needs.

Syllabus Change Policy: This syllabus is only a guide for the course and is subject to change with advanced notice.

Rice Honor Code: In this course, all students will be held to the standards of the Rice Honor Code, a code that you pledged to honor when you matriculated at this institution. If you are unfamiliar with the details of this code and how it is administered, you should consult the Honor System Handbook at http://honor.rice.edu/honor-system-handbook/ . This handbook outlines the University's expectations for the integrity of your academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process.

Special Materials Required for Class: Use of engineering calculation paper is strongly encouraged. Simple drafting tools to allow you to draw a circle, a straight line and a curved line, as well as an engineering scale and protractor, will be needed to complete some of the homework assignments and could be useful during exams.